

## Abstract

A power amplifier system having a high frequency power amplifier circuit section 10 employing as its amplifying elements source-grounded enhancement type n-channel MESFETs J1, J2 for receiving a drain bias voltage Vdd and a gate bias voltage Vgg of zero volts or positive low potentials as supplied from a unipolar power supply and for amplifying an input signal superposed therewith to thereby output an amplified signal indicative of a change in drain currents Id1, Id2, an output matching circuit section 11 for applying impedance matching to such amplified high frequency signal and then outputting the resultant signal, and a gate bias voltage circuit section 12 for supplying a gate bias voltage to the high frequency power amplifier circuit is disclosed along with a mobile communications terminal device including the system, wherein the MESFETs J1, J2 are such that in cases where a forward direct current (DC) gate voltage is applied to a gate terminal with a source terminal coupled to the ground, the DC gate voltage becomes greater than or equal in value to 0.65 volts (V), said DC gate voltage causing a gate current value per gate width of 100 micrometers ( $\mu\text{m}$ ) to exceed 100 microamperes ( $\mu\text{A}$ ).